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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Erik Bijpost

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EXAMINER

RUMP, RICHARD M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

06/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,815	Applicant(s) BIJPOST ET AL.	
	Examiner Richard M. Rump	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-13 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-13,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

Claims 1-3, 6-13 & 15-18 are pending and presented for examination. Claim 5 was amended into claim 1, claim 14 was cancelled and claims 15-18 are new as filed on 5 May 2009.

Newly submitted claims 17-19 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: as they are drawn to a product, which is patentably distinct since the composition can be made via mutually different fashion, for example as outlined by US Patent No. 4063919 (See example).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 17-19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-13 & claims 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Velzel *et al.* (hereinafter referred to as Velzel, WO 0220471 – Provided in IDS).

Regarding claims 1, 2, 3, 6, 11-13 & 15 Velzel discloses a method for improving the crushing strength, impact resistance, and the compressibility of urea granules (page 1, lines 1-4). This methodology requires the addition of a molten urea made up of polyvinyl compounds along with an organic molecule made up of polyvinyl compounds (page 2, line 34) and an organic molecule consisting of 1-10 carbon atoms (carboxylic acid, hydroxyl, or amide groups – page 3, lines 29-31 or those mentioned in table 5) and 2-5 polar organic groups (water -- page 2, line 17). Specifically note in table 5 of Velzel which discloses an additive composition of 2000 ppm (by weight of urea) of 8% concentrate polyvinyl alcohol in H₂O and Ca(OOCCH₃)₂.

The aqueous solution of the urea additive has a minimal concentration between 100 and 10000 ppm by urea weight (0.01 to 1 wt % by urea (page 4, lines 14-16 & page 9, lines 8-9 (optimum dose of additive))); though at max up to 10 wt % may be used (page 5, lines 23-29)) according to Velzel (page 4 lines 13-15; Also see table 5).

Regarding claim 7, Velzel discloses a general formula (CHX-CHY)_n (page 2, line 35) where n is between 4 and 10,000 and X and Y are independent of one another and are selected from the group consisting of hydrogen atom, or a polar organic group, in such a way that the admixed amount of water is at most 5 weight % based on the amount of urea (page 2 line 36 bridging page 3 line 3).

Regarding claim 8, Velzel further states that a carboxylic acid group, ester group, hydroxyl group, an amine group, or an amide group can be the X and Y used in instant claim 7 (page 3, lines 21-25).

Regarding claims 9 and 10, Velzel discloses that X is substantially a hydrogen atom (page 3, line 25) and Y is substantially a hydroxyl group (page 3, line 25, 29 and 34). 70% to 95% of Y consists of a hydroxyl group (page 3, lines 30-35).

Regarding claim 16, this claim is met by the *supra* rationale as Velzel discloses the products from these (see examples and claims 16-17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Velzel (WO 0220471) with the Meriam-Webster entry on Polyol as evidentiary reference.

Regarding 4, the limitations of claim 1 are met by Velzel as described in the *supra* 102 rejection. However, Velzel does not expressly state the usage of pentaerythritol. However, it would have been obvious to try pentaerythritol as the used polyol since Velzel mentions the usage of numerous other polyols such as polyaspartic

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acid, poly(acrylic acid), poly(vinylalcohol) (see tables 1, 3, and 5) that may be used to create the strengthened urea. It is known in the art that pentaerythritol, polyaspartic acid, poly(acrylic acid), and poly(vinylalcohol) are a functional equivalent for polyols as by definition a polyol is any alcohol containing multiple hydroxyl groups. The motivation in using any of the supra mentioned compounds is to increase the industrial application by adding more possible compounds to use.

Response to Arguments

Applicant's arguments filed 5 May 2009 have been fully considered but they are not persuasive.

Regarding the traversal of Velzel, as shown above the reference discloses 0.1 to 0.3 wt% by urea wt% of the additive, with at max of 10 wt % (See page 5, lines 26-29). As such, the up to 1 wt% is anticipated (as it is below the instantly claimed requirement) and further as is the requirement that the additive preferably be between 1 and 20 wt%.

The claim seems to read as one organic group, claims explicitly should preclude the possibility of using only polyvinyl alcohol.

Regarding applicant's traversal on claim 4, the Applicant has not met the burden showing that one would not use pentaerythritol as the additive polyol.

Conclusion

Claims 1-4, 6-13, 15-16 stand rejected.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Rump whose telephone number is (571)270-5848. The examiner can normally be reached on Monday through Friday 7:00 AM-4:30 PM EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571)272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. M. R./
Examiner, Art Unit 1793

/Stuart Hendrickson/

Primary Examiner, Art Unit 1793